FEASIBILITY STUDY

Salisbury
I-85
New Interchange and Connector
East of Bringle Ferry Road (SR 1002)
Rowan County
R-2718

Prepared by
Program Development Branch
Division of Highways
N. C. Department of Transportation

Paula Gee Davis, P.E.
Highway Planning Engineer

W. J. Watson, P.E.
Highway Planning Engineer

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Date

Whitmel H. Webb, III, P.E.
Head of Feasibility Studies

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I. GENERAL DESCRIPTION

This is a feasibility study of a proposed diamond interchange for Bringle Ferry Road (SR 1002) to be located on I-85 approximately 1.5 miles north of the Innis Street (SR 2200) interchange and approximately 0.7 miles north of the existing Bringle Ferry Road grade separation. To justify a Bringle Ferry Road interchange, it should provide access to both I-85 and a regional corridor. On the existing Thoroughfare Plan, a downtown connector and a US 52 relocation serve this function. The utility of this project is questionable without the programming of a regional corridor with sufficient traffic volumes to require this interchange. We recommend restudy of a Bringle Ferry Road interchange as a part of a regional corridor study or pending inclusion of downtown connector and US 52 relocation in the Transportation Improvement Program.

This is not an exhaustive environmental or design investigation but a preliminary study to define feasible project alternatives and determine estimated right-of-way and construction costs for these alternatives.

II. NEED FOR PROJECT

This project is requested by the City of Salisbury. The purpose of this interchange and connector is to provide additional access to Salisbury and relieve congestion on the Innis Street interchange. Traffic volumes on Bringle Ferry Road are approximately 4000 vehicles per day (vpd). The Bringle Ferry Road interchange must provide regional access, otherwise traffic volumes will not be sufficient to justify an interchange at this location nor will the interchange relieve congestion on Innis Street.

Bringle Ferry Road is shown on the Salisbury Thoroughfare Plan of October 1, 1974 as a major thoroughfare. A proposed interchange on the Thoroughfare Plan is in the same location as the Bringle Ferry Interchange, but it is not connected to Bringle Ferry Road.

On this Thoroughfare Plan, an Inter City Expressway provides a connection to this interchange extending from northwest Salisbury to the southeast. Also, US 52 is realigned to the northeast to connect to this interchange. These important links provide a regional corridor and require an interchange at this location. Since these links are not programmed and are not a part of this interchange study, the interchange will not be justified based on traffic demands.

The Salisbury Thoroughfare Plan update will be completed in the fall of 1992. The Bringle Ferry Road interchange may be incorporated into the Thoroughfare Plan update so that it provides regional access, and traffic volumes will be sufficient to justify an interchange at this location. A direct connection to downtown Salisbury and relocation of US 52, as is shown on the existing thoroughfare plan, would provide such a regional corridor.

Bringle Ferry Road (SR 1002) is classified as a Minor Arterial route in the Statewide Functional Classification System. It is also a Federal Aid, Urban route (8890). The land use is mixed residential and business/commercial with no access control.

Widening of I-85 to 6 or 8 lanes in the project area is currently being studied. (TIP Project I-2511). The affected interchanges and grade separations in the Salisbury/East Spencer area have been studied because of the widening of I-85. Grade separations exist at Bringle Ferry Road (over the interstate) and SR 2114 (under the interstate.) On preliminary investigation, these two grade separations could be replaced with one interchange and connectors. The Bridge #127 elevates Bringle Ferry Road over I-85 and has a sufficiency rating on a scale of 1 to 100 of 35.7. Bridge #128 and #129 elevate I-85 over SR 2114 and have sufficiency ratings of 73.4 and 63.1 percent respectively. (The widening of I-85, if the grade separations remain at SR 2114 and SR 1002, will require replacement of these bridges.)

The clear roadway width on Bringle Ferry Road Bridge #96 over Town Creek is 28 feet. This bridge has a sufficiency rating of 99.7 percent.

III. RECOMMENDATION BASED ON STUDIED INTERCHANGE

Consideration was given to a proposed Bringle Ferry Road Interchange on I-85 approximately 1.5 miles north of the Innis Street interchange and approximately 0.7 miles north of the existing Bringle Ferry Road grade separation. (See Figure 1.) Without providing a regional corridor connecting with this interchange, traffic is not expected to reach volumes to support an interchange at this location. A direct connection to downtown Salisbury and relocation of US 52, as shown on the Thoroughfare Plan, would provide such a corridor.

Since the utility of this project is questionable without a regional corridor connection to the proposed interchange, we recommend restudy of the Bringle Ferry interchange as part of a regional corridor study or upon inclusion of these improvements in the updated Salisbury Thoroughfare Plan.

An environmental screening was made. The realignment of Bringle Ferry Road and the location of the interchange affect approximately 7000 linear feet of wetlands. No public parks are likely affected by this project.

The existing Bringle Ferry Road would require realignment for a length of approximately 1.5 miles north of I-85 and 0.5 miles south of I-85. (See Figure 1). The studied typical section on new alignment would have a total of 28 feet of pavement with 12 feet lanes and 2 foot paved shoulders on 100 feet of right-of-way.

Studied improvements include a full diamond interchange with vertical clearance of 16' 6" to 17' over the interstate. The interchange structure would require 46 feet of pavement width and would provide a left turn lane and 3 foot shoulders. (Note: This interchange structure is not of sufficient size if US 52 and a downtown connector are constructed.)

Utility conflicts are high because of large power transmission lines that parallel the interstate at the project area.

The total estimated cost for is:

R/W Cost	: $1,060,000
Construction Cost	: 5,250,000
Total Cost:	$6,310,000

One residential and no business relocatees would be required.

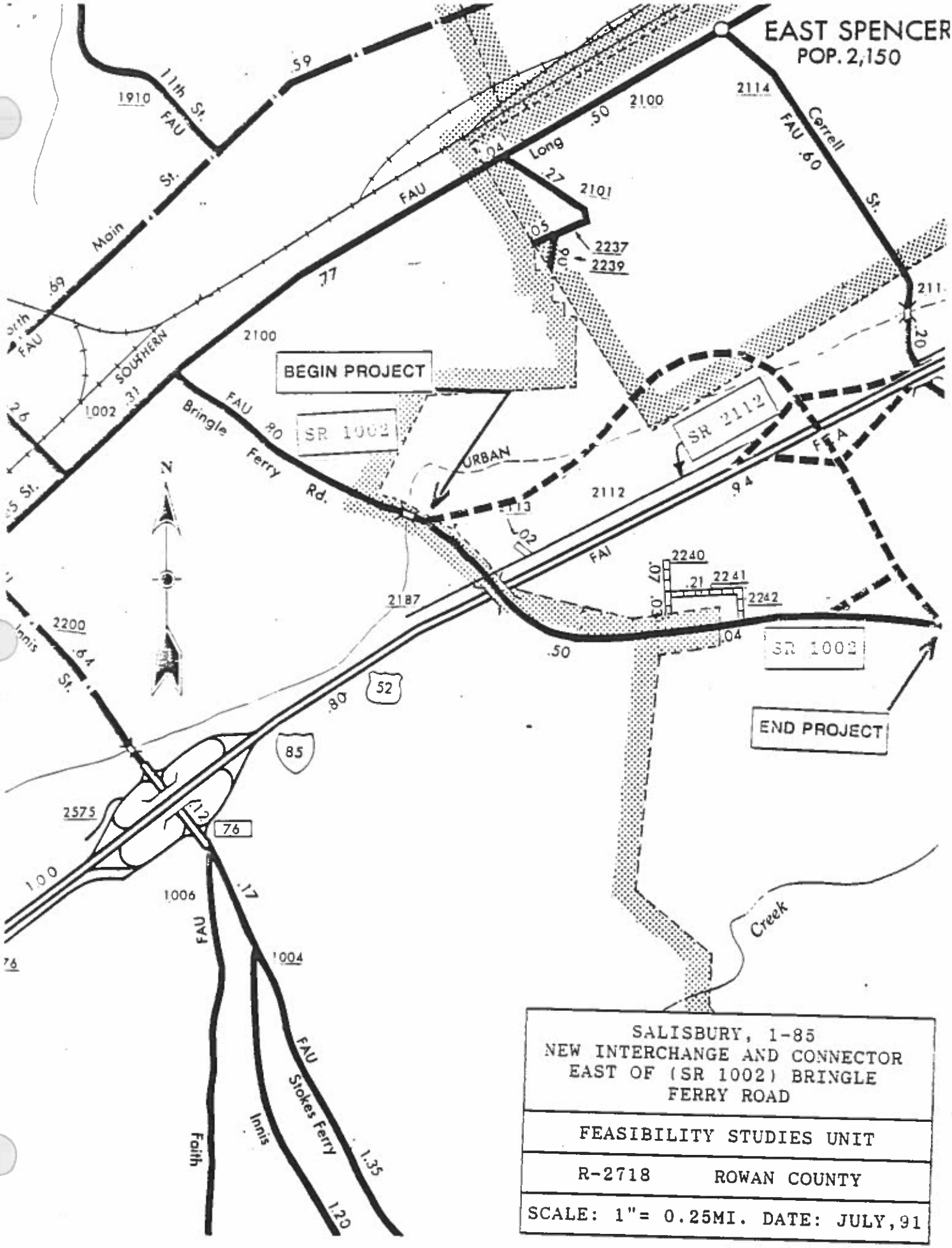
IV. OTHER COMMENTS

The Bicycle Program did not have recommendations for SR 1002 at this location. Two historic districts are located west of Bringle Ferry Road, but will not be affected by the interchange as proposed in this study. A landfill is located east of SR 1915 and is also outside of the Bringle Ferry Road interchange project limits.

The existing Bringle Ferry Road grade separation, in its present location, does not meet the 1 mile minimum standard interchange spacing requirement set within urban boundaries. However, locating the bridge further north on I-85 moves the proposed interchange out of the urban boundary of Salisbury. In rural areas, a 2 mile interchange spacing is set by the Federal Highway Administration. Since the Salisbury urban boundary is parallel and within a few hundred feet of the interstate in the vicinity of this project, the urban standard of 1 mile spacing will likely be the control. For this reason, the studied Bringle Ferry Road interchange was located approximately 0.7 miles north of the existing Bringle Ferry Road grade separation.

The interchange location investigated by this study was suggested by the City of Salisbury and is based on the thoroughfare plan. Proposed interchange spacing provides equal distance of approximately 1.5 miles between the Innis Street interchange and the next interchange north at Long Ferry Road (SR 2120) and meets interchange spacing requirements by the Federal Highway Administration, provided the 1 mile spacing is required.

Approximately 7,000 linear feet of wetlands would likely be impacted by this project based on preliminary investigation. The proposed connectors and interchange ramps parallel the stream resulting in extensive wetland involvement. Subsequent designs for a regional corridor and a downtown connector should consider perpendicular crossings of the streams to minimize impacts.



SALISBURY, I-85 NEW INTERCHANGE AND CONNECTOR EAST OF (SR 1002) BRINGLE FERRY ROAD
FEASIBILITY STUDIES UNIT
R-2718 ROWAN COUNTY
SCALE: 1"= 0.25MI. DATE: JULY,91

FIGURE 1